ANATOMY OF HUMAN BREAST pdf

1: Anatomy of the lactating human breast redefined with ultrasound imaging.

Continued Breast Tests. Physical Exam: By examining the breast and nearby underarm tissue for lumps, skin changes, nipple discharge, or lymph nodes, a doctor can find any abnormalities in the.

Additional Resources and References It is important for women to become familiar with the normal anatomy and physiology function of their breasts so that they can recognize early signs of possible abnormalities. This section outlines basic information on breast composition, development, and typical changes from puberty to pregnancy to menopause. A layer of fatty tissue surrounds the breast glands and extends throughout the breast. The fatty tissue gives the breast a soft consistency. Toward the nipple, each duct widens to form a sac ampulla. During lactation, the bulbs on the ends of the lobules produce milk. Once milk is produced, it is transferred through the ducts to the nipple. The breast is composed of: Arteries carry oxygen rich blood from the heart to the chest wall and the breasts and veins take de-oxygenated blood back to the heart. The axillary artery extends from the armpit and supplies the outer half of the breast with blood; the internal mammary artery extends down from neck and supplies the inner portion of the breast. Initial Breast Development Human breast tissue begins to develop in the sixth week of fetal life. Breast tissue initially develops along the lines of the armpits and extends to the groin this is called the milk ridge. By the ninth week of fetal life, it regresses goes back to the chest area, leaving two breast buds on the upper half of the chest. In females, columns of cells grow inward from each breast bud, becoming separate sweat glands with ducts leading to the nipple. Both male and female infants have very small breasts and actually experience some nipple discharge during the first few days after birth. Puberty usually begins for women around age 10 or After pubic hair begins to grow, the breasts will begin responding to hormonal changes in the body. Specifically, the production of two hormones, estrogen and progesterone, signal the development of the glandular breast tissue. This initial growth of the breast may be somewhat painful for some girls. During this time, fat and fibrous breast tissue becomes more elastic. The breast ducts begin to grow and this growth continues until menstruation begins typically one to two years after breast development has begun. Menstruation prepares the breasts and ovaries for potential pregnancy.

ANATOMY OF HUMAN BREAST pdf

2: Breast - Wikipedia

Slide show: Female breast anatomy Previous Next 1 of 6 Female breast anatomy The structure of the female breast is complex â€" including fat, glandular and connective tissue, as well as lobes, lobules, ducts, lymph nodes, blood vessels and ligaments.

Skin In mammals , a nipple also called mammary papilla or teat is a small projection of skin containing the outlets for 15â€"20 lactiferous ducts arranged cylindrically around the tip. Marsupials and eutherian mammals typically have an even number of nipples arranged bilaterally, from as few as two to as many as Mechanoreceptors are identified respectively by Type I slowly-adapting with multiple Merkel corpuscle end-organs and Type II slowly-adapting with single Ruffini corpuscle end-organs , as well as Type I rapidly-adapting with multiple Meissner corpuscle end-organs and Type II rapidly-adapting with single Pacinian corpuscle end-organs. The dominant nerve supply to the nipple comes from the lateral cutaneous branches of fourth intercostal nerve. It marks the T4 fourth thoracic vertebra dermatome and rests over the approximate level of the diaphram. The venous vessels parallel the arteries. The rest of the drainage leaves the nipple and breast through infroclavicular, pectoral, or parasternal nodes. Since nipples change throughout the life span in men and women, the anatomy of the nipple can change and this change may be expected and considered normal. In male mammals A human male nipple Almost all mammals have nipples. Why males have nipples has been the subject of scientific research. Differences among the sexes called sexual dimorphism within a given species are considered by evolutionary biologists to be mostly the result of sexual selection , directly or indirectly. For traits where there is no difference among the sexes, evolutionary biologists assume that there has been no advantage to one of the sexes losing the trait. Breast feeding The physiological purpose of nipples is to deliver milk to the infant, produced in the female mammary glands during lactation. During breastfeeding, nipple stimulation by an infant will simulate the release of oxytocin from the hypothalamus. Oxytocin is a hormone that increases during pregnancy and acts on the breast to help produce the milk-ejection reflex. Oxytocin release from the nipple stimulation of the infant causes the uterus to contract even after childbirth. These contractions are necessary to prevent post-partum hemorrhage. The result of nipple stimulation by the newborn helps to move breast milk out through the ducts and to the nipple. A poor latch results in insufficient nipple stimulation to create the let down reflex. The nipple is poorly stimulated when the baby latches on too close to the tip of the nipple. This poor attachment can cause sore and cracked nipples and a reluctance of the mother to continue to breastfeed. If the baby increases nursing time at the nipple, the mammary glands respond to this stimulation by increasing milk production. Clinical significance Pain Nipple pain can be a disincentive for breastfeeding. In some instances an ulcer will form on the nipple. If a nipple appears to be wedge-shaped, white and flattened, this may indicates that the attachment of the infant is not good and there is a potential of developing cracked nipples. Discharge Nipple discharge refers to any fluid that seeps out of the nipple of the breast. Discharge from the nipple does not occur in lactating women. And discharge in non-pregnant women or women who are not breasfeeding may not cause concern. Men that have discharge from their nipples are not typical. Discharge from the nipples of men or boys may indicate a problem. Discharge from the nipples can appear without squeezing or may only be noticeable if the nipples are squeezed. One nipple can have discharge while the other does not. The discharge can be clear, green, bloody, brown or straw-colored. The consistency ct can be thick, thin, sticky or watery. Nipple discharge is most often not cancer benign , but rarely, it can be a sign of breast cancer. It is important to find out what is causing it and to get treatment. Here are some reasons for nipple discharge: This is caused by hormones from the mother before birth. It usually goes away in 2 weeks. Cancers such as Paget disease a rare type of cancer involving the skin of the nipple can also cause nipple discharge. Nipple discharge is more likely to be normal if it comes out of both nipples or happens when the nipple is squeezed your nipples. Squeezing the nipple to check for discharge can make it worse. Leaving the nipple alone may make the discharge stop. Most of the time a mammogram and an examination of the fluid is done. Oftentimes a biopsy is performed A fine needle aspiration FNA biopsy can be fast and least painful. A very thin, hollow needle and

slight suction will be used to remove a small sample from under the nipple. Using a local anesthetic to numb the skin may not be necessary since a thin needle is used for the biopsy. Receiving an injection to prevent pain from the biopsy may be more painful than the biopsy itself. Discharge from the nipple can occur. The nipple may swell in some genetically-males possibly due to increased levels of estrogen. Inverted nipples - This is normal if the nipples have always been indented inward and can easily point out when touched. If the nipples are pointing in and this is new, this is an unexpected change. Skin puckering of the nipple - This can be caused by scar tissue from surgery or an infection. Often, scar tissue forms for no reason. Most of the time this issue does not need treatment. This is an unexpected change. This change can be of concern since puckering of the nipple, or retraction of the nipple can indicate an underlying change in breast tissue that can be cancerous. It is rarely due to breast cancer. Scaly, flaking, itchy nipple - This is most often due to eczema or a bacterial or fungal infection. This change is not expected. This is a rare form of breast cancer involving the nipple. An infection in the breast or inflammatory breast cancer can cause this problem. This not an expected change. Retracted nipples - The nipple was raised above the surface but changes begins to pull inward and does not come out when stimulated. This is an expected change it did not exist before. A person may find out they have breast cancer after a routine mammogram. Warning signs can be: Thickening or swelling of part of the breast, areola or nipple. Irritation or dimpling of breast skin. Redness or flaky skin in the nipple area or the breast. Pulling in of the nipple or pain in the nipple area. Nipple discharge other than breast milk, including blood. Any change in the size or the shape of the breast or nipple. Pain in any area of the breast. Other conditions of the nipple can mimic the signs and symptoms of breast cancer. In these circumstances, the nipple itself can become infected with Candida that is present in the mouth of the breastfeeding infant. The infant will transmit the infection to the mother. Most of the time, this infection is localized to the area of the nipple. In some cases the infection can can progress to become a full-blown case of mastitis or breast infection. Herpes infection of the nipple can go unnoticed because the lesions are small but usually are quite painful. Herpes in the newborn is a serious and sometimes fatal infection.

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3: Breast Anatomy - National Breast Cancer Foundation

Diagram Of Human Breast Diagram Of Human Breast - Anatomy Organ. In this image, you will find an Adipose tissue, Lobe, Areola, Nipple, Opening of the lactiferous duct, Lactiferous duct, Lobule containing alveoli in it.

Skin In women, the breasts overlie the pectoralis major muscles and usually extend from the level of the second rib to the level of the sixth rib in the front of the human rib cage ; thus, the breasts cover much of the chest area and the chest walls. At the front of the chest, the breast tissue can extend from the clavicle collarbone to the middle of the sternum breastbone. At the sides of the chest, the breast tissue can extend into the axilla armpit , and can reach as far to the back as the latissimus dorsi muscle , extending from the lower back to the humerus bone the longest bone of the upper arm. As a mammary gland , the breast is composed of differing layers of tissue , predominantly two types: The female adult breast contains 14â€”18 irregular lactiferous lobes that converge at the nipple. Milk exits the breast through the nipple, which is surrounded by a pigmented area of skin called the areola. The size of the areola can vary widely among women. These glands secrete oily fluid that lubricate and protect the nipple during breastfeeding. The tissue composition ratios of the breast also vary among women. The fat-to-connective-tissue ratio determines the density or firmness of the breast. The nipple of the breast is surrounded by the areola nipple-areola complex. The areola has many sebaceous glands, and the skin color varies from pink to dark brown. The basic units of the breast are the terminal duct lobular units TDLUs , which produce the fatty breast milk. They give the breast its offspring-feeding functions as a mammary gland. They are distributed throughout the body of the breast. The terminal lactiferous ducts drain the milk from TDLUs into 4â€”18 lactiferous ducts, which drain to the nipple. The milk-glands-to-fat ratio is 2: Sensation in the breast is provided by the peripheral nervous system innervation by means of the front anterior and side lateral cutaneous branches of the fourth-, fifth-, and sixth intercostal nerves. The T-4 nerve Thoracic spinal nerve 4 , which innervates the dermatomic area , supplies sensation to the nipple-areola complex. The axillary lymph nodes include the pectoral chest , subscapular under the scapula , and humeral humerus-bone area lymph-node groups, which drain to the central axillary lymph nodes and to the apical axillary lymph nodes. The lymphatic drainage of the breasts is especially relevant to oncology because breast cancer is common to the mammary gland, and cancer cells can metastasize break away from a tumour and be dispersed to other parts of the body by means of the lymphatic system. Breast size and other characteristics do not predict the fat-to-milk-gland ratio or the potential for the woman to nurse an infant. The size and the shape of the breasts are influenced by normal-life hormonal changes thelarche, menstruation, pregnancy, menopause and medical conditions e. The suspensory ligaments sustain the breast from the clavicle collarbone and the clavico-pectoral fascia collarbone and chest by traversing and encompassing the fat and milk-gland tissues. The breast is positioned, affixed to, and supported upon the chest wall, while its shape is established and maintained by the skin envelope. The space between the breast and the pectoralis major muscle, called retromammary space , gives mobility to the breast. The chest thoracic cavity progressively slopes outwards from the thoracic inlet atop the breastbone and above to the lowest ribs that support the breasts. The inframammary fold, where the lower portion of the breast meets the chest, is an anatomic feature created by the adherence of the breast skin and the underlying connective tissues of the chest; the IMF is the lower-most extent of the anatomic breast. Normal breast tissue typically has a texture that feels nodular or granular, to an extent that varies considerably from woman to woman. Breast development The breasts are principally composed of adipose, glandular , and connective tissues. Puberty Five-stage Tanner Scale The morphological structure of the human breast is identical in males and females until puberty. For pubescent girls in thelarche the breast-development stage , the female sex hormones principally estrogens in conjunction with growth hormone promote the sprouting, growth, and development of the breasts. During this time, the mammary glands grow in size and volume and begin resting on the chest. These development stages of secondary sex characteristics breasts, pubic hair, etc. This condition of asymmetry is transitory and statistically normal in female physical and sexual development. This continues for approximately four years until the final shape of the breast size, volume, density is established at about the age

of Mammoplasia breast enlargement in girls begins at puberty, unlike all other primates in which breasts enlarge only during lactation. Breast tenderness during pregnancy is common, especially during the first trimester. By mid-pregnancy, the breast is physiologically capable of lactation and some women can express colostrum , a form of breast milk. However, milk production is blocked by the hormones progesterone and estrogen until after delivery, when progesterone and estrogen levels plummet. The breasts can decrease in size when the levels of circulating estrogen decline. The adipose tissue and milk glands also begin to wither. The breasts can also become enlarged from adverse side effect s of combined oral contraceptive pills. The size of the breasts can also increase and decrease in response to weight fluctuations. Breastfeeding The primary function of the breasts, as mammary glands, is the nourishing of an infant with breast milk. Milk is produced in milk-secreting cells in the alveoli. High levels of oxytocin trigger the contraction of muscle cells surrounding the alveoli, causing milk to flow along the ducts that connect the alveoli to the nipple. Clinical significance Main article: Breast disease The breast is susceptible to numerous benign and malignant conditions. The most frequent benign conditions are puerperal mastitis , fibrocystic breast changes and mastalgia. Lactation unrelated to pregnancy is known as galactorrhea. It can be caused by certain drugs such as antipsychotic medications , extreme physical stress, or endocrine disorders. Breast cancer Breast cancer is the most common cause of cancer death among women [29] and it is one of the leading causes of death among women. Factors that appear to be implicated in decreasing the risk of breast cancer are regular breast examinations by health care professionals, regular mammograms , self-examination of breasts , healthy diet, and exercise to decrease excess body fat. Normally, males produce lower levels of estrogens and higher levels of androgens , namely testosterone , which suppress the effects of estrogens in developing excessive breast tissue. In boys and men, abnormal breast development is manifested as gynecomastia , the consequence of a biochemical imbalance between the normal levels of estrogen and testosterone in the male body. Plastic surgery Conventional mastectomy top ; skin sparing mastectomy and latissimus dorsi myocutaneous flap reconstruction, prior to nipple reconstruction and tattooing bottom. Plastic surgery can be performed to augment or reduce the size of breasts, or reconstruct the breast in cases of deformative disease, such as breast cancer. Society and culture General In Christian iconography , some works of art depict women with their breasts in their hands or on a platter, signifying that they died as a martyr by having their breasts severed; one example of this is Saint Agatha of Sicily. A typical example is the so-called Venus of Willendorf , one of many Paleolithic Venus figurines with ample hips and bosom. Many female deities representing love and fertility were associated with breasts and breast milk. Figures of the Phoenician goddess Astarte were represented as pillars studded with breasts. Isis , an Egyptian goddess who represented, among many other things, ideal motherhood, was often portrayed as suckling pharaohs , thereby confirming their divine status as rulers. Even certain male deities representing regeneration and fertility were occasionally depicted with breast-like appendices, such as the river god Hapy who was considered to be responsible for the annual overflowing of the Nile. Female breasts were also prominent in the Minoan civilization in the form of the famous Snake Goddess statuettes. In Ancient Greece there were several cults worshipping the "Kourotrophos", the suckling mother, represented by goddesses such as Gaia , Hera and Artemis. The worship of deities symbolized by the female breast in Greece became less common during the first millennium. The popular adoration of female goddesses decreased significantly during the rise of the Greek city states, a legacy which was passed on to the later Roman Empire. Women in art were covered in clothing from the neck down, including female goddesses like Athena , the patron of Athens who represented heroic endeavor. Aphrodite , the goddess of love, was more frequently portrayed fully nude, though in postures that were intended to portray shyness or modesty, a portrayal that has been compared to modern pin ups by historian Marilyn Yalom. The legend was a popular motif in art during Greek and Roman antiquity and served as an antithetical cautionary tale. Body image Many women regard their breasts as important to their sexual attractiveness , as a sign of femininity that is important to their sense of self. Brassiere , Cleavage breasts , Toplessness , Modesty , Naturism , and Exhibitionism As is customary in her culture, a bare-breasted Himba woman of northern Namibia wears a traditional headdress and skirt Because breasts are mostly fatty tissue, their shape can -within limits- be molded by clothing, such as foundation garments. Some religions ascribe a special status to the

female breast, either in formal teachings or through symbolism. Many cultures, including Western cultures in North America, associate breasts with sexuality and tend to regard bare breasts as immodest or indecent. In some cultures, like the Himba in northern Namibia , bare-breasted women are normal. In some African cultures, for example, the thigh is regarded as highly sexualised and never exposed in public, but breast exposure is not taboo. In a few Western countries and regions female toplessness at a beach is acceptable, although it may not be acceptable in the town center. In many countries, breastfeeding in public is common, legally protected, and generally not regarded as an issue. However, even though the practice may be legal or socially accepted, some mothers may nevertheless be reluctant to expose a breast in public to breastfeed [49] [50] due to actual or potential objections by other people, negative comments, or harassment. Mammary intercourse , Breast fetishism , and Stimulation of nipples In some cultures, breasts play a role in human sexual activity. In Western culture, breasts have a " They are sensitive to the touch as they have many nerve endings; and it is common to press or massage them with hands or orally before or during sexual activity. During sexual arousal , breast size increases, venous patterns across the breasts become more visible, and nipples harden. Some writers have suggested that they may have evolved as a visual signal of sexual maturity and fertility. In the ancient Indian work the Kama Sutra , light scratching of the breasts with nails and biting with teeth are considered erotic. In these cases, it seems that sensation from the nipples travels to the same part of the brain as sensations from the vagina, clitoris and cervix. Nipple stimulation may trigger uterine contractions, which then produce a sensation in the genital area of the brain. Breast-shaped hill There are many mountains named after the breast because they resemble it in appearance and so are objects of religious and ancestral veneration as a fertility symbol and of well-being. Retrieved 31 October Retrieved 21 October Retrieved 9 May

4: Anatomy Of Human Breast - Human Anatomy System

The morphological structure of the human breast is identical in males and females until puberty. For pubescent girls in thelarche (the breast-development stage), the female sex hormones (principally estrogens) in conjunction with growth hormone promote the sprouting, growth, and development of the breasts.

5: Nipple - Wikipedia

Introduction. Anatomical diagrams and descriptions of the gross anatomy of the lactating human breast have changed little over the last years and are based on meticulous dissections of the breasts of lactating cadavers (Fig. 1) by Sir Astley Cooper (Cooper,).

6: Breast anatomy | Lactating breast | Research | Medela

Breast Anatomy As you learn about breast cancer, we will repeatedly reference the anatomy of the breast. Understanding the different parts and functions will help you better grasp the details of breast cancer.

7: e-Anatomy: radiologic anatomy atlas of the human body

Anatomy of the lactating human breast redefined with ultrasound imaging The aim of this study was to use ultrasound imaging to re-investigate the anatomy of the lactating breast. The breasts of 21 fully lactating women.

8: Tag: anatomy of human breast ppt - INNER ORGAN

Breast Anatomy Picture The breast refers to the front of the chest or, more specifically, to the mammary gland. See a picture of Breast Anatomy and learn more about the health topic.

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Breast (Anatomy and Function) Topic Guide Facts on the Breast The breast generally refers to the front of the chest and medically specifically to the mammary gland.

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